

**ABSTRACT**

An apparatus comprising a reagent atomization and delivery system. In one embodiment, a reagent atomization and delivery system includes an atomizer that uniformly and simultaneously delivers a spray of atomized reagent toward a plurality of reagent receiving sites on a specimen plate. The reagent atomization and delivery system is advantageously used in conjunction with an imaging system (*e.g.*, visible-spectrum, infrared-spectrum, *etc.*). Specifically, once the atomized reagent is dispensed, it triggers chemical/physiological reactions that are then advantageously subjected to imaging analysis (*e.g.*, visible-spectrum imaging, infrared spectrum imaging, *etc.*).